# Assessment: Program Assessment Plan



## Program (CTE) - AAS Industrial Millwright Technology

**Unit Mission:** Technical training is taught in mechanical operations, fluid power, industrial pumps, preventive predictive maintenance, precision shaft alignment, electrical theory, welding processes, and all safety standards for tools and equipment in the work place. Upon successful completion of the program, the student will possess the skills necessary to be able to diagnose and repair mechanical, electrical, and liquid and air handling systems. These are common systems found in most industrial, agricultural, mining, construction, and service industries that use machinery to produce a product or service. Other employment opportunities for graduates of this program can include steel mills, paper mills, mining operations, gravel quarries, universities, schools, textile mills, food processing plants, automotive plants, ship yards, power plants, hospitals, aerospace industry facilities, and office complexes.

## Outcome: Think critically to solve workplace problems

Think critically to solve workplace problems.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Assignment - Written - IT 220 Alignment Principles (Active)

**Criterion:** 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in Laser Alignment Module 15502.

**Notes:** All written and performance assessments are national standards through National Center for Construction and Educational Research (NCCER).

# Outcome: Communicate clearly and effectively both in writing and orally

Communicate clearly and effectively both in writing and orally

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Assignment - Written - BUS 113 Business Communications. (Active)

**Criterion:** 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in Basic Communication Skills Module 00107.

**Notes:** All written and performance assessments are national standards through National Center for Construction and Educational Research (NCCER).

### **Outcome: Human experience**

Understand the significance of creativity in the human experience.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Assignment - Written - Art 107 Design Fundamentals I (2-D) (Active)

Criterion: 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in

Field Sketching.

**Notes:** Considering requiring this for all certificate and associate students.

## Outcome: Blueprint and drawing interpretation

Read and interpret standard blueprints and drawings of industrial equipment.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Assignment - Written - IT 201 Blueprint Reading and Measurement Fundamentals (Active)

**Criterion:** 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in

 $Introduction\ to\ Construction\ Drawings\ Module\ 00105.$ 

Notes: All written and performance assessments are national standards through National Center for Construction and

Educational Research (NCCER).

# Outcome: Align shafts using laser and dial indicator methods of alignment

Align shafts using laser and dial indicator methods of alignment.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Assignment - Written - IT 220 Alignment Principles (Active)

**Criterion:** 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in Laser Alignment Module 15502.

Notes: All written and performance assessments are national standards through National Center for Construction and

Educational Research (NCCER).

## Outcome: Perform troubleshooting and maintenance

Perform troubleshooting and maintenance of fluid handling pumps, industrial gear trains and drives, and material handling systems.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Assignment - Written - IT 210 Failure Analysis and Predictive/ Preventive Maintenance (Active)

**Criterion:** 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in

Troubleshooting and Repairing pumps module 15405.

Notes: All written and performance assessments are national standards through National Center for Construction and

Educational Research (NCCER).

# Outcome: Rebuild and replace components in liquid and air handling systems

Rebuild and replace components in liquid and air handling systems.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Written Test/Exam - IT 103 Industrial Pump Technology (Active)

**Criterion:** 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in Pumps Module 15404.

Notes: All written and performance assessments are national standards through National Center for Construction and

Educational Research (NCCER).

### Outcome: Bearing and seal replacement

Replace bearings and seals in a non-destructive manner.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Survey - IT 105 Mechanical Power Transmission (Active)

**Criterion:** 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in Troubleshooting and Repairing Gearboxes Module 15411.

Notes: All written and performance assessments are national standards through National Center for Construction and

Educational Research (NCCER).

# Outcome: Basic electrical theory and safety on single and three phase power equipment

Understand and apply basic electrical theory and safety on single and three phase power equipment.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Written Test/Exam - IT 214 Basic Electrical Theory for Industrial Technicians (Active)

Criterion: IT 214 Basic Electrical Theory for Industrial Technicians

Notes: This assessment is not an NCCER assessment.

### **Outcome: Failure identification**

Identify failure causes in industrial equipment using vibration analysis and the root cause analysis tree.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Written Test/Exam - IT 210 Failure Analysis and Predictive/ Preventive Maintenance (Active)

Criterion: 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100% in

Troubleshooting and Repairing Conveyors Module 15402.

Notes: All written and performance assessments are national standards through National Center for Construction and

Educational Research (NCCER).

## Outcome: Identify metals according to standard metallurgical tests

Identify metals according to standard metallurgical tests.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Survey - IT 216 Basic Metallurgy (Active)

Criterion: 80% of students will pass a written assessment of Metallurgy, Chapter 3, with a 65% or higher.

Notes: This assessment is not an NCCER assessment

## Outcome: Fabrication and layout of equipment in industrial settings

Fabrication and layout of equipment in industrial settings

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Written Test/Exam - IT 201 Blueprint Reading and Measurement Fundamentals (Active)

**Criterion:** All written and performance assessments are national standards through National Center for Construction and Educational Research (NCCER).

**Notes:** All written and performance assessments are national standards through National Center for Construction and Educational Research (NCCER).

## Outcome: Perform safely in the work environment

Perform safely in the work environment, meeting and obeying all workplace safety requirements.

Outcome Status: Active Assessment Year: 2015-2016 Start Date: 01/25/2016

#### Assessment Measures

Written Test/Exam - IT 106 Millwright and Process Terminology (Active)

**Criterion:** 80% of students will pass a written assessment with a 70% or higher and pass a performance assessment with 100%, in Safety and Hazard Recognition.

**Notes:** All written and performance assessments are national standards through National Center for Construction and Educational Research (NCCER).